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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,054	04/19/2004	David R. Elmalch	62041(51588)	2370

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EXAMINER	
PERREIRA, MELISSA JEAN	
ART UNIT	**PAPER NUMBER**
1618	
MAIL DATE	**DELIVERY MODE**
08/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 10/827,054	**Applicant(s)** ELMALEH ET AL.	
	Examiner Melissa Perreira	**Art Unit** 1618	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 20 July 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: _____.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see below.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

Claims 1-4,7,9,11-13,17,44-47,50,52,54,119,123,125 and 147-151 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elmaleh (WO97/19705) in view of Knust et al. (US 4,323,547) and Elmaleh et al. (US 4,524,059) as stated in the office action mailed 5/22/07.

Applicant asserts that Elmaleh (WO97/19705) does not teach or suggest modifying the compounds to increase the number of carbon atoms between the -COOR2 group and the cyclic moiety.
Elmaleh (WO97/19705) does disclose that the chemical groups are interchangeable with the various moieties without significantly altering the activity of the stereoisomeric fatty acid analog for diagnostic imaging purposes. Therefore it would be obvious that altering the position of the cyclic struture to the C3 position as seen in the structure II would not effect the activity of the fatty acid analog. In combination with the reference of Elmaleh et al. (US 4,524,059) it would be obvious to alter the cyclopropane substitution to the C3 position (see below).

Applicant asserts that Knust et al. does not teach or suggest the inclusion of a cyclic moiety at least one carbon atom away from the carboxylic acid thereby allowing a beta-oxidation to occur, thus trapping the labeled analog in bodily tissue.
The reference of Knust et al. was not utilized to teach of the inclusion of a cyclic moiety at least one carbon atom away from the carboxylic acid but to teach that a rapid pickup of a maximum of about 40%/g heart is found with heart muscle with omega-18F-heptadecanoic acid and that centrally labeled or midsubstituted 18F- labeled fatty acids having 10-20 carbon atoms in the carbon chain are also effective in the investigations of the kinetics of heart muscle exchange. In combination with the reference of Elmaleh (WO97/19705) it would be obvious that the desired length of the fatty acid backbone chain would be that of a heptadecanoic acid.

Applicant asserts that Elmaleh et al. (US 4,524,059) does not teach or suggest the use of cyclic moieties.
The reference of Elmaleh et al. (US 4,524,059) was not used to teach the inclusion of a cyclic moiety but to teach that a substituent at the C3 position lowers the rate of the in vivo beta-oxidation of the analog and a substituent at the C3 position of the analog traps the analog in the metabolizing tissue and inactivates the beta-hydroxyacyl dehydrogenase to which the analog. In combination with the reference of Elmaleh (WO97/19705) it is obvious that a cyclopropane substituent located at the C3-C4 position would inhibit the second step of the beta-oxidation mechanism (from the examination of the beta-oxidation mechanism as evidenced by Knapp, Jr. et al. US 4,764,358; column 2, lines 45-60). The addition of water across the double bond (Knapp, Jr. et al. US 4,764,358; column 2, EQ 2) would not be possible as the cyclopropane ring would inhibit addition since ring opening is not possible.

Applicant asserts that one of ordinary skill in the art will readily recognize that the incorporation of a cyclic structure into the backbone of a fatty acid chain will greatly vary the flexibility and spatial conformation of the fatty acid chain as compared to an equal length chain not containing a cyclic structure.
The examiner disagrees as the cyclic moiety is a cyclopropane. Cyclopropanes are rigid and planar structures that do not allow for conformational changes. The addition of a cyclopropane (as taught by Elmaleh (WO97/19705)) into the product of the combined disclosures would reduce the flexibilitly along the backbone fatty acid chain neighboring the cyclopropane substituent. Again, Elmaleh (WO97/19705) does disclose that the chemical groups are interchangeable with the various moieties without significantly altering the activity of the stereoisomeric fatty acid analog for diagnostic imaging purposes. The cyclopropane derivative is known to be taken up into the heart and therefore there one skilled in the art would have a reasonable expectation of success for use of the product of the combined disclosures to be taken up by the heart tissue.

MICHAEL G. HARTLEY
SUPERVISORY PATENT EXAMINER